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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/405,921 09/24/99 YOSELOFF

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EXAMINER

ASHBURN, S

ART UNIT

PAPER NUMBER

3713

DATE MAILED:

04/20/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/405,921

Applicant(s)

YOSELOFF ET AL.

Examiner

Steven Ashburn

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 April 2001.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 September 1999 is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

DETAILED ACTION

RESPONSE TO AMENDMENT

1. The examiner acknowledges the amendment filed 02 April 2001 and notes the following:
 - a. The abstract has been replaced with an acceptable paragraph
 - b. The specification has been amended to support forthcoming drawings.
 - c. The drawings will be modified to correct deficiencies cited previously.
 - d. Claim 9 has been amended.
 - e. Claims 22-26 have been added.

SPECIFICATION

2. The specification is objected to under 37 CFR 1.71 for not fully disclosing the invention such that a person skilled in the art could make use of it. The specification describes a system using commercially available components to replace a custom game controller with a generic controller based on a personal computer (PC) platform. However, the system describes custom components to interface with the original game machine hardware (spec. page 10, lines 26-27). These interface components are not described in sufficient detail to allow one skilled in the art to recreate the claimed invention without undue experimentation.

CLAIM REJECTIONS - 35 USC § 112

3. Claim 18 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains to make and/or use the invention. As discussed above, the interface adapter is not described sufficiently in the specification. Also, the applicant must clarify what is unique about the component in comparison to known art of input/output interfaces?

CLAIM REJECTIONS - 35 USC § 103

4. Claims 1-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Acres (U.S. Patent 5,752,882) in view of Arcade Machine Retrofit (10/20/1996, www.cygnus.uwa.edu.au/~jaycole/jaw/arcade.html)

5. The patent to Acres provides an example of modern gaming machines linked on a network. The patent teaches to following aspects that are relevant to this application:

Claims 1, 19, 20, 24, 26:

- a. A generic personal computer controlling a variety of gaming devices produced by different manufacturers through a common interface unit (col. 2, lines 40-43; col. 16, line 48 – col. 17, line 51).
- b. Linking gaming machines to a personal computer (col. 7, lines 9-15) though a communication port (col. 8, lines 41-61).
- c. Displaying game status data and symbology on a machine's video display (figs. 1-12). This is a inherent trait of electronic gaming devices.
- d. Personal computers inherently contain an embedded motherboard.

Claim 2 & 11: Employing a personal computer as a central controller (col. 7, lines 25-26, 53-55).

Claim 3 & 12: Communicating via standard PC communication ports (col. 23, lines 13-23).

Claim 4, 13, 25: Linking a variety of gaming machines types (e.g. slot, table, pushbutton) to a central controller (col.7, lines 16-25).

Claims 5, 6, 14, 15, 23: Providing user interfaces including a card reader and coin acceptor/dispenser (col. 26, line 55 – col. 29, line 27).

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Claims 7, 8, 16 & 17, 23: Providing security devices including a soft tilt (figs. 9, 14 & 16; col. 8, lines 17-29).

Claim 18: Linking game machines to central controller through an interface board which includes means to accommodate serial, discrete, and network data signals (col. 9, line 31 – col. 10, line 44; figs. 2, 3 & 4.)

Claim 22:

- a. Pin connectors are typically used for connecting personal computers to peripheral devices (e.g. DB-9 connector for serial mouse).
- b. Personal computers inherently contain circuit board connectors.
- c. Personal computer inherently contain circuit boards for controlling peripheral devices (e.g. serial controller, PCI controller)
- d. Personal computers inherently contain ports for connecting the controls for peripherals (RS-232, USB, FireWire, etc)

From the above references it can be seen that the patent to Acres teaches a majority of the features of claimed invention. The essential difference is that Acres' implementation is a network system vice a stand-alone unit. As admitted in the specification, it is well within the skill of those in art to construct video wagering games devices using personal computer motherboards (page 12, lines 18-25). Regardless of the commonalties, there are some aspects of the disclosed invention that Acres does not teach. These include the following:

Claim 9:

- a. Reconfiguring an electronic wagering game by removing its specialized processor and replacing it with a personal computer and interface unit.

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- b. Transmitting signals through the system components to confirm proper communication.

Claim 10: Confirming system operation by generating game symbology on the video display.

Claim 18: Employing an interface board to link a central controller with peripheral components for executing a wagering game.

6. It is a common necessity to upgrade obsolete processors for faster, more capable systems. In every upgrade effort a primary concern is interfacing the new system with the original hardware and software. Such an effort typically requires the engineering of an interface adapter to integrate the obsolete hardware, (which operate at different voltages, rates, protocols, etc.), with the new processor. Likewise, legacy software must be rehosted onto the new processor. After the new system is engineered, it is common practice implement basic input/output tests to assure the reengineered system functions as required.

Personal computers are a typical design choice in all fields of engineering for replacing obsolete and/or specialized processors due to their affordability and flexibility. In the field of electronic amusement devices, numerous Internet web sites describe methods of retrofitting obsolete arcade machines with personal computers. One such site is "Retrofitting a Low-Boy Arcade Machine with a Pentium-powered M.A.M.E. Setup" (Arcade). Arcade teaches the same basic motivation and process claimed by the present application. It teaches the use of a personal computer as low cost method to upgrade the specialized processors of 1970s era arcade machines. In short, the method involves removing the obsolete processor and replacing it with a personal computer executing software re-hosted onto a PC platform (Claim 9).

The retrofit preserves the original user interface and interfaces it with the PC-controller. It is notable that the interface is rather crude. In a more complex effort, one skilled in the art would readily see the need for a more graceful interface solution. It is standard practice in the general art of engineering to provide an interface unit between a controller and its components to perform signal input/output and conditioning. Many well-known commercial products are available for performing this function. It would be obvious to employ such a solution in a retrofit effort more complicated than described by Arcade. (Claim 18)

Transmitting signals through the system components to confirm proper communication and operation is a standard checkout and troubleshooting technique required in any engineering effort. It would have been obvious to one skilled in the art to perform these steps to ensure proper operation of a new controller in a retrofitted system (Claims 9 & 10).

7. Retrofitting computing systems with PC-based processors is a common practice because they provide a generic, cost effective controller. Arcade teaches replacing customized video game controllers with a PC. Acres discloses the use of a PC for control the operations of various gaming devices through an interface adapter. In an effort to retrofit wagering devices, it would have been obvious to one skilled in the art at the time of the invention to upgrade various gaming machines using a personal computer and interface adapter. As suggested by the prior art, the solution would provide a low-cost, flexible system for retrofitting machines manufactured by various companies.

RESPONSE TO ARGUMENTS

8. The following lists the applicant's arguments which shall be answered *ad seriatim* below:
 - a. In regards to the 35 CFR 1.71 objection to the specification, the examiner has not established a *prima facie* case for lack of enablement.

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- b. In regards to the 35 USC § 112 rejection of claim 18, the prior art does not teach the claimed invention.
 - c. In regards to the 35 USC § 103 of claims 1-22:
 - i. The patent to Acres is non-analogous art to the field of the current invention.
 - ii. Acres does not disclose key features of the claimed invention
 - iii. The Acres rejection fails to appreciate the underlying concept of the invention recited in the claims.
 - iv. There is no relation between Acres network system and the internal hardware modifications disclosed in the claimed invention.
 - v. The Arcade reference is not relevant to the claimed invention.
 - vi. Neither reference describes the display device of claim 10.
 - vii. Neither reference describes the interface adapter of claim 18.
9. The examiner's objection to the specification for lack of enablement has been revised for clarity and to remove the "best mode" objection. The following discussion provides further details of the examiner's objection to the specification.

In the examiner's understanding, the described invention provides a system and method for retrofitting a wagering device⁹ with custom electronics, with a personal computer (PC) based system. In brief, the retrofit components comprise a PC, interface adapter, and interface cabling/connectors. The retrofit allows the new processor to interface with the vestigial hardware (e.g. game rules unit, coin dispenser, controls, etc.). Notably, the key component is the interface adapter. Page 10, lines 14-29 of the specification describes the requirement for the interface adapter to perform all types of signal conditioning including buffering, inversion, conversion, encoding, decoding, multiplexing, latching, relaying, etc. More so, it must perform these operations for undefined inputs. Furthermore,

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the complexity of the interface adapter is compounded by providing "plug and play" type compatibility. Despite its complexity, the interface adapter is only superficially described in the specification. Overall, the specification demonstrates the applicant's conception of the problem to be solved; however it does not offer an enabled solution.

To the examiner's knowledge, no "off the shelf" single unit has the capacity to perform the functions described in the specification. Page 10, lines 26-27 describe an interface driven by "special purpose components". It would be an utterly non-trivial engineering effort to construct and/or configure such a device. Consequently, it is deemed that the interface adapter falls outside the typical skill of one in the art and would require undue experimentation to create. The objection is maintained.

10. Claim 18 was rejected under 35 U.S.C. 112, first paragraph for lack of enablement. In this instance, the examiner's issue with the claim is not a matter a prior art. As explained above, the interface adapter of claim 18 is not sufficiently described in the specification to enable one skilled in the art to make use of it. The rejection is maintained.

11. The examiner acknowledges the applicant's argument that Acres does not disclose a system for retrofitting wagering game devices as described in the specification. Unfortunately, neither do the claims. In particular, the apparatus claims (e.g. claims 1-8) do not describe a system for retrofitting a gaming device. Instead they simply claim a gaming device with a "universal controller". A PC is a general-purpose processor and any PC-based system fits the description of "universal controller". As a result, the examiner employed the Acres patent to demonstrate the obviousness of the invention as it is claimed.

Regardless, Acres is relevant to the disclosed invention. It teaches a system controlled by a personal computer that controls non-homogeneous gaming machines through interface boards.

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Hence Acres network gaming system solves problems analogous to the applicant's embedded "universal" controller. The examiner does not find the argument persuasive.

12. The applicant argues that Acres does not disclose limitations of the claimed invention including:

- a. Computerized wagering game status information.
- b. Symbol elements that change with the play of the wagering game.

If one considers the broadest reasonable interpretation of the claims, it is readily seen that Acres, or any other electronic wagering device, satisfies these limitations. Slot machines typically display the number of credits played, credits awarded, time remaining, etc. All these fall within the category of "game status information". Likewise, slot machines typically display rotating indicia. This describes the limitation of symbol elements that change with the play of the game. The examiner does not find the argument persuasive.

13. The applicant argues that the rejection based on Acres fails to appreciate the underlying concept of the invention recited in the claim. The examiner disagrees. As discussed above, the specification does not sufficiently describe either the "universal" controller or the interface adapter. Acres discloses a system that employs both personal computer and interface board in a wagering device with all the components cited. By the tenant of "broadest reasonable interpretation" the reference applies.

The examiner appreciates the underlying concept of the invention. As a result, he did not simply apply Acres in a lack of novelty rejection. Instead, the examiner applied Acres in view of a system for retrofitting an arcade game by interfacing original components with an embedded PC. The examiner does not find the argument persuasive.

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14. The applicant argues that Acres is not relevant prior art because it does not disclose an embedded controller. The examiner has discussed this issue in paragraphs 13. It teaches a system controlled by a personal computer that controls non-homogeneous gaming machines through interface boards. Hence Acres network gaming system solves problems analogous to the applicant's embedded "universal" controller. The Arcade reference discloses a system for retrofitting a arcade game by interfacing original components with an embedded PC. The examiner maintains that the claimed invention would have been obvious based on the combination of prior art.

15. The applicant argues that the Arcade reference is not analogous prior art. The examiner disagrees. First, the Arcade reference falls into the same class of art. Second, the Arcade reference discloses a method for retrofitting an amusement device by integrating a PC-based processor with the device's original components.

The examiner does not rely on Arcade as a reference to teach a complex retrofitting effort. Such efforts are commonly performed in other fields (e.g. modernizing military aircraft systems). Arcade is relied on to suggest performing a retrofitting effort in the field of amusement devices. In this application, Arcade is a relevant reference.

Arcade does not disclose the use of an interface adapter to integrate to original hardware with the new processor. However one skilled in the art would readily see the potential to implement a more graceful interface than disclosed by Arcade. This is especially true in view of Acres, which discloses an interface unit for integrating various gaming devices with a central PC. The examiner does not find the argument persuasive.

16. The applicant argues that neither reference discloses the limitations of claim 10. As discussed in paragraph 12, the examiner disagrees. Under the broadest reasonable interpretation of the claims, it is readily seen that Acres, or any other electronic wagering device, satisfies these

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limitations. Slot machines typically display the number of credits played, credits awarded, time remaining, etc. All these fall within game status information. Likewise, slot machines typically display rotating indicia. This describes the limitation of symbol elements that change with the play of the game. The examiner does not find the argument persuasive.

17. The applicant argues that neither reference discloses the limitations of claim 18. The examiner concurs that the first rejection did not adequately address the limitations of the claim. However the examiner maintains that the claim would be one skilled in the art in view of the references. The rejection has been revised accordingly.

18. Based on the above, the examiner does not find the applicant's argument persuasive and maintains the rejection under 35 U.S.C. 103.

CONCLUSION

19. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

20. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven Ashburn whose telephone number is 703 305 3543. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Valencia Martin-Wallace can

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be reached on 703 308 1148. The fax phone numbers for the organization where this application or proceeding is assigned are 703 305 3590 for regular communications and 703 308 3579 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308 1078.



Steven Ashburn
April 19, 2001



MICHAEL O'NEILL
PRIMARY EXAMINER